IN THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

1.(Currently Amended) A silicon refining method comprising the steps of:

filling a cold ~~inductive~~ crucible (1) with solid silicon;

melting the ~~content of~~ solid silicon in the crucible to form a silicon melt;

~~creating, by means of the inductive crucible, a turbulent stirring of the silicon melt (b) by bringing the liquid from the bottom of the crucible to the free surface by ascending along the central axis of the crucible~~ causing the silicon melt from a bottom of the crucible to ascend along a central axis thereof to a free surface of the silicon melt, to turbulently stir the silicon melt; and

directing a plasma (f) generating by an inductive plasma torch (2) towards the melt surface for a duration enabling elimination of impurities for which the reactive gas (g_r) of the plasma is adapted.

2.(Currently Amended) The method of claim 1, wherein the cold crucible includes a coil supplied by an A.C. voltage, the intensity of the turbulent stirring ~~is~~ being a function of the frequency of an electromagnetic field created by the ~~crucible (1)~~ coil.

3.(Previously Amended) The method of claim 1, wherein the directing step sequentially uses several reactive gases (g_r).

4.(Previously Amended) The method of claim 3, wherein the reactive gases (g_r) are selected from the group including chlorine, oxygen, hydrogen, and water vapor.

5.(Canceled)

6.(Canceled)

7.(Previously Amended) The method of claim 1, wherein the silicon is processed by batches of a volume substantially corresponding to the volume that can be contained in the crucible (1), the crucible not being integrally emptied at the end of the processing of a current batch to form a liquid seed furthering the melting during the next batch.

8.(Currently Amended) The method of claim 1, wherein, during an initial starting phase ~~of the installation~~, the plasma is used without any reactive gas to heat up the surface of the silicon ~~load~~ contained in the crucible (1), until ~~this load~~ the silicon reaches a temperature sufficient to make it conductive, the ~~continuation of the load~~ continued heating of the silicon and its maintaining at the desired temperature being afterwards ensured by ~~the~~ a magnetic field ~~of the inductive crucible~~ generated by a coil of the crucible.

9.(Currently Amended) A silicon refining installation comprising:

a cold ~~inductive~~ crucible (1) adapted to receiving the silicon, the cold crucible having a coil supplied by an A.C. voltage;

an inductive plasma torch (2) directed towards the free surface of the silicon load contained in the crucible; and

a removable magnetic yoke (3) between the plasma torch (2) and the crucible (1) for inverting a stirring direction of the silicon load, the yoke being ring-shaped to enable the passing of the plasma flame (f).

10.(Previously Presented) The installation of claim 9, wherein the crucible (1) includes, at its bottom, an aperture (14) having its opening controlled by an electromagnetic valve (5).

11.(Previously Presented) A silicon refining method comprising the steps of:

filling a cold inductive crucible (1) with solid silicon;

melting the content of the crucible;

creating, by means of the inductive crucible, a turbulent stirring of the silicon melt (b) by bringing the liquid from the bottom of the crucible to the free surface by ascending along the central axis of the crucible;

directing a plasma (f) generated by an inductive plasma torch (2) towards the melt surface for a duration enabling elimination of impurities for which the reactive gas (g_r) of the plasma is adapted;

inverting the melt stirring direction; and

injecting, as a reactive gas (g_r) of the plasma, an element enabling doping of the silicon.

12.(Previously Presented) The method of claim 11, wherein the reactive gas (g_r) injected to dope the silicon is hydrogen.